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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Curry, et al. Group Art Unit: 2663

Serial No.: 09/514,371 Examiner: Vu, H.

Filed: February 28, 2000

For: **INTERNET LONG DISTANCE TELEPHONE SERVICE**

Attorney Docket No.: 00-VE22.07A (65632-0107)

APPEAL BRIEF

Box AF
Commissioner for Patents
United States Patent and Trademark Office
Washington D.C. 20231

Dear Sir:

This is an appeal brief from the final rejection of claims 1-10, 12-22 and 28-37 of the Final Office Action dated April 23, 2002. This application was filed on February 28, 2000.

I. REAL PARTY IN INTEREST

The real party in interest is Verizon Services Corp., Assignee, a corporation organized and existing under the laws of the state of Delaware, and having a place of business at 1095 Avenue of the Americas, New York, NY 10036.

II. RELATED APPEALS AND INTERFERENCES

Applicants are not aware of any related appeals or interferences that would affect the Board's decision on the current appeal.

III. STATUS OF CLAIMS

Claims 1-22 and 28-37 are pending. Claim 11 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form. Claims 1-10, 12-22, and 28-37 have been rejected.

IV. STATUS OF AMENDMENTS

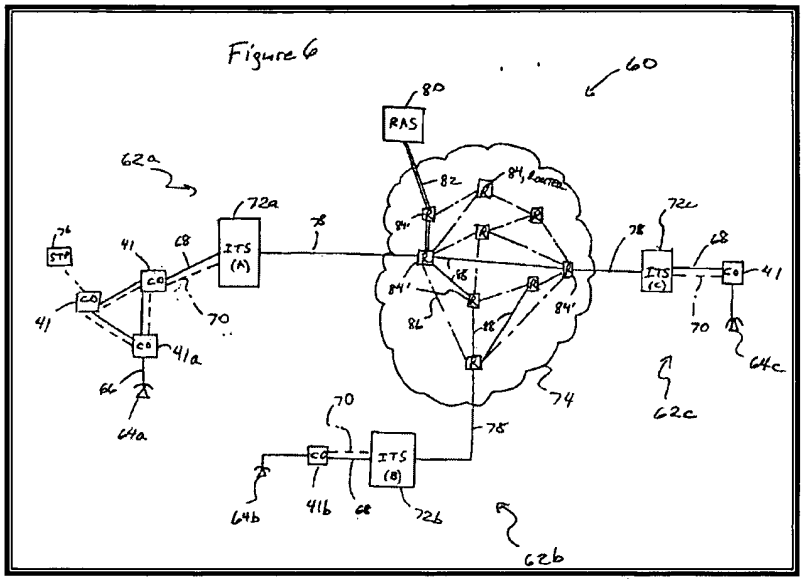
No Amendment After Final Rejection has been entered into the prosecution record of the present application.

V. SUMMARY OF THE INVENTION

The invention of the present patent application relates to providing telephone communications over a wide area packet switched network, such as the Internet. More specifically, the invention relates to a method for establishing a communication link between a calling telephone and a called telephone over the wide area packet switched network.

Figure 6 of the application (reproduced adjacent this paragraph) illustrates an exemplary telecommunications system 60 using a wide area packet switched network, which is a useful reference to explain the invention of the present application. The

system 60 includes a plurality of switched telecommunications networks 62a, 62b, and 62c operating in different geographical regions. For example, each telecommunications network 62 may be a public switched telephone network such as a Regional Bell Operating Company, or a private communication network having a limited service area. Each network 62 includes a plurality of interconnected switching systems 41 serving customer premises terminals 64, e.g., telephones, via local loop connections 66. Each telephone network 62 also includes a telephony server 72 that provides an interface between the corresponding telephone network 62 and the wide area packet switched network 74. *See,* Specification, pp. 29-30.



The system 60 also includes a routing and administration (RAS) server 80 that includes a routing and administration database for managing call routing translations and user access permissions. The RAS server 80 includes a database that stores all area codes serviced by a given telephone system 62a, as well as the Internet address identifying the point of presence for the serving telephony server 72. Hence, the RAS 80 serves as a pointer to identify a destination telephony server 72 based on the area code of the called station. *See,* Specification, p. 31.

When a calling station 64c initiates a call to a called station 64a, the telephony server 72c processes the call by sending a routing request to the RAS 80 over the network

74. The RAS 80 accesses its database to determine the address of the telephony server 72a corresponding to the area code of the called station 64a. Then, the RAS 80 sends the IP address of the telephony server 72a to the telephony server 72c. In response, telephony server 72c sends signaling and/or voice traffic to the telephony server 72a by outputting data packets having the IP address of the telephony server 72a. Once received by the telephony server 72a, the signaling and/or voice traffic is recovered from the payload of the data packets and processed by upper-layer protocol to establish the communication link between the calling station 64c and the called station 64a via the wide area packet switched network 74. *See,* Specification, pp. 31-32.

In certain embodiments of the invention, the communication link is established via a predetermined path through the network 74 to maintain a prescribed service level, i.e., quality of service (QoS), for the calling party. That is, instead of allowing the various data packets of the same telephone call (or subsequent calls between the same telephony servers) to travel through different paths of the network 74 from the calling station 64c to the called station 64a – as is typical in a wide area packet switched network – all of the data packets are routed through the network 74 over the same predetermined communication path. Preferably, the predetermined communication path guarantees a certain minimum bandwidth and latency to ensure a certain quality of service. In this embodiment, the RAS 80 stores the predetermined communication path so that it can be used whenever a call is initiated between the same telephony servers. *See,* Specification, pp. 32-34.

VI. ISSUES

1. Has the Examiner failed to establish a proper motivation for one of skill in the art to combine the alleged prior art references of Yang[1], Crawley[2] and/or Picard.[3]

2. With respect to claims 2-4, 7-10, 12, 17, 19, 21-22, 32-37, has the Examiner failed to establish a *prima facie* case of obviousness under 35 U.S.C. §103(a), when none of the cited prior art references, even if combined, teach or suggest communicating telephone information between the calling and the called parties via a *predetermined communication path* through a wide area packet switched network?

3. With respect to claims 2-4 and 37, has the Examiner failed to establish a *prima facie* case of obviousness under 35 U.S.C. §103(a), when none of the cited prior art references, even if combined, teach or suggest the use of a routing and administration server that provides the identity of a predetermined communication path through the wide area packet switched network?

4. With respect to claim 5, has the Examiner failed to establish a *prima facie* case of obviousness under 35 U.S.C. §103(a), when none of the cited prior art references, even if combined, teach or suggest a telephony server from which a prescribed service level corresponding to the calling party can be obtained?

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[1] FRC 1798 – "INETPhone: Telephone Services and Servers on Internet" by Yang
[2] U.S. Patent No. 5,995,503 to Crawley
[3] U.S. Patent No. 6,233,318 to Picard

5. With respect to claims 9-10 15-16, 20-22, and 28-29, has the Examiner failed to establish a *prima facie* case of obviousness under 35 U.S.C. §103(a), when none of the cited prior art references, even if combined, teach or suggest the steps of determining a condition of a called party and sending communication information from the telephony server associated with the calling party to the telephony server associated with the called party based upon the condition of the called party.

6. With respect to claim 12, has the Examiner failed to establish a *prima facie* case of obviousness under 35 U.S.C. §103(a), when none of the cited prior art references, even if combined, teach or suggest any of the steps of: (i) sensing a condition of a calling party, (ii) suspending the transmission of data packets between the telephony servers, and (iii) transmitting a signaling data packet to the called party concerning the condition of the calling party?

7. With respect to claims 13-16, has the Examiner failed to establish a *prima facie* case of obviousness under 35 U.S.C. §103(a), when none of the cited prior art references, even if combined, teach or suggest the steps of: (i) sending communication samples from the called party to the calling party via the network, and (ii) forwarding the received communication samples to the first central office on an assigned trunk line based on the identifier?

8. With respect to claims 17 and 22, has the Examiner failed to establish a *prima facie* case of obviousness under 35 U.S.C. §103(a), when none of the cited prior art

references, even if combined, teach or suggest "changing a data rate of the communication link based on traffic on the predetermined communication path" in an Internet-based telephony system.

9. With respect to claims 30-34, has the Examiner failed to establish a *prima facie* case of obviousness under 35 U.S.C. §103(a), when none of the cited prior art references, even if combined, teach or suggest "generating a session identifier identifying a call attempt between the calling party and the called party" and incorporating the session identifier along with audio information in the data packets communicated between the calling party and the called party.

VII. GROUPING OF CLAIMS

1. Claims 1, 6 and 18 rise and fall together. *See,* Issue No. 1
2. Claims 2-4 rise and fall together. *See,* Issue No. 1; Issue Nos. 2 and 3
3. Claim 5 rises and falls alone. *See,* Issue Nos. 1 and 4
4. Claims 7-8 and 19 rise and fall together. *See,* Issue Nos. 1 and 2
5. Claims 9-10 and 21 rise and fall together. *See,* Issue Nos. 1, 2 and 5
6. Claim 12 rises and falls alone. *See,* Issue Nos. 1, 2 and 6
7. Claims 13-14 rise and fall together. *See,* Issue Nos. 1 and 7
8. Claims 15-16 rise and fall together. *See,* Issue Nos. 1, 5 and 7
9. Claim 17 rises and falls alone. *See,* Issue Nos. 1, 2 and 8
10. Claims 20 and 28-29 rise and fall alone. *See,* Issue Nos. 1 and 5
11. Claim 22 rises and falls alone. *See,* Issue Nos. 1, 2, 5 and 8

12. Claims 30-31 rise and fall together. *See,* Issue Nos. 1 and 9

13. Claims 32-34 rise and fall together. *See,* Issue Nos. 1, 2 and 9

VIII. ARGUMENT

A. Background

The Examiner has rejected all of the pending claims, except Claim 11, as being obvious under 35 U.S.C. §103(a) in light of various combinations of Yang[4], Crawley[5], Picard[6], and/or Hogan.[7] The Examiner has indicated that Claim 11 would be allowable if re-written in independent form.

The primary referenced relied upon by the Examiner is Yang. The Yang document discloses a long-distance telephone system wherein voice packets are delivered from a calling party to a called party over the Internet. Yang indicates that Internet servers (referred to in Yang as "INET Phone servers") would, among other things, function to: (i) receive a local call and accept a phone number for remote dialing from the local call; (ii) look up the local directory for a remote server of the requested call; (iii) make a connection to a remote server; and (iv) maintain full-duplex, real-time exchanges of voice packets via Internet. *Yang,* pp. 3-4. Yang further indicates that a Directory Server would be necessary to map between area codes of the called number and IP addresses of the corresponding Internet servers. *Yang,* p.4. The Examiner conceded that Yang does not disclose various elements of the pending claims, and, accordingly, the

[4] FRC 1798 – "INETPhone: Telephone Services and Servers on Internet" by Yang
[5] U.S. Patent No. 5,995,503 to Crawley
[6] U.S. Patent No. 6,233,318 to Picard
[7] U.S. Patent No. 5,483,587 to Hogan

Examiner looked to Crawley, Picard and/or Hogan to cure the admitted deficiencies of Yang.

Crawley is directed to a system for providing quality of service (QoS) routing functions in a connectionless network. *Crawley,* 2:27-29. Crawley is *not* directed to a telephony system. The Crawley system generates a link resource advertisement for each node in the network, which includes information regarding link resources available on a particular node in the network. The system also generates a resource reservation advertisement for each reservation on each node in the network, which includes information regarding a particular node's reservations. *Crawley,* 2:34-42. Network communication paths are then calculated in response to a QoS request, wherein the network path calculations are based on information contained in the link resource advertisements and the resource reservation advertisements. *Crawley,* 2:42-45. Ideally, based on these parameters, a network communication path can be determined from the source node to the destination node that satisfies the requested QoS. Once a network path satisfying the QoS request is calculated for a particular data flow, the path may optionally be "pinned" for that data flow such that the path does not change in response to changes in available link resources or network topology not on the established path. *Crawley,* 2:51-54; 8:28-34. Crawley states that pinning down the path eliminates interruptions in QoS during the data flow caused by the availability of better links after the path is selected. *Crawley,* 8:31-33. In the Final Office Action, the Examiner primarily relies upon Crawley for its alleged teaching of a "predetermined communication path" through a packet switched network having a certain minimum quality of service. Applicant disagrees with the Examiner's interpretation of Crawley.

Picard is directed to a unified messaging system that allows a subscriber to access stored voicemail messages, facsimile messages, combined voice and facsimile messages, and video messages over a telephone network or a data network. *See,* Picard, Abstract. In the Final Office Action, the Examiner relies on Picard primarily for its brief reference to a "unique identifier from the session information" as allegedly teaching the use of the specific "session identifier" recited in certain of the pending claims of the present invention. Applicant disagrees with the Examiner's interpretation of Picard.

B. Issue No. 1

At the outset, Applicant respectfully submits that the Examiner has not set forth a sufficient motivation for the alleged combination of Yang with either Crawley or Picard. The Examiner summarily states that the motivation to combine Yang with Crawley is to "enhance system performance by providing guaranteed level of services." *See,* Final Office Action, p.3, lines 6-8. However, Yang does not contemplate or suggest that there would be any need in a long distance Internet telephone system to employ a Quality of Service system as in Crawley, or otherwise, to ensure a guaranteed level of service. Yang does not even suggest that the normal Internet packet routing method would be insufficient for Internet long distance telephone systems. Therefore, there is no motivation in Yang to modify its teaching to include a method of guaranteeing a certain minimum level of service. Similarly, Crawley does not indicate that its Quality of Service system would be applicable or useful in connection with a long distance telephone system for the Internet. Rather, Crawley identifies video conferencing – which requires the simultaneous transfer of both video and audio data – as an example of where

its system would be useful. *Crawley,* 1:18-20. Therefore, Applicant submits that the Examiner has failed to set forth sufficient motivation to combine Yang with Crawley under §103(a).

Similarly, Applicant submits that the Examiner has failed to set forth sufficient motivation to combine the teachings of Yang with those of Picard. The Examiner summarily states that the motivation to combine Yang with Picard is to "improve transmission reliability..." *See,* Final Office Action, p.3, lines 5-6. However, Picard does not address or even contemplate a long distance telephone communication system over a packet switched network, as set forth in the pending claims. Rather, as discussed above, Picard is directed to a unified messaging system – a system wholly different from a long distance telephone communication system over a packet switched network. Yang makes no suggestion that a session identifier could be used in his system. Indeed, there is no discussion in either Yang or Picard to the effect that their respective teachings would have applicability outside of their specific respective environments. Therefore, Applicant submits that there is insufficient motivation to combine Yang with Picard.

Because each of the Examiner's rejections is based upon an improper combination of Yang with either Crawley or Picard under §103(a), Applicant submits that each of the rejected claims is therefore allowable.

C. Issue No. 2

Pending claims 2-4, 7-10, 12, 17, 19, 21-22, 32-37 all recite that data packets are sent between a server associated with a calling party and a server associated with a called party via a "*predetermined* communication path." (emphasis added). Specifically, the

communication path is determined prior to the initiation of a call by a calling party. For example, the specification of the pending application describes an embodiment of the claimed "predetermined communication path" – referred to therein as a "dedicated virtual path" – as being established by contracting with the Internet service provider controlling each router in the desired dedicated virtual path to program their router(s) to transport certain data packets along a predetermined path. *See,* Specification, pp. 32-35. Thus, whenever a given calling party places a call to a given called party, the data packets transferred between the two parties will travel the same predetermined path through the Internet. Moreover, the predetermined communication path is the same from call to call between the same telephony servers. This method of communication over the Internet is different from the standard method of communication, wherein the data packets that constitute a single message may each take different paths through the Internet before they are re-assembled by the destination computer.

In contrast to the claimed invention, the Crawley method involves actually *calculating* a communication path through the network based upon various parameters, such as the resources available for the various nodes in the Internet and the reservations already made on the various nodes. Further, the Crawley method involves calculating a new network communication path – a potentially *different* path from the previous one – in response to each request to send data according to a particular QoS. *See,* e.g., *Crawley,* 2:40-45; 5:27-8:26. Thus, in Crawley, a potentially different data communication path is calculated at the time of each new request to transmit a group of data packets. Though Crawley indicates that once a communication path satisfying the desired QoS is selected the path may optionally be "pinned down", the path is only

pinned down to "prevent the path from changing in response to changes in network topology...[to] eliminate interruptions in QoS caused by the availability of better links after the path is selected." *Crawley,* 8:28-33. Thus, while Crawley suggests that the communication path can be pinned down for a given communication session, Crawley does not teach or suggest that this particular communication path is somehow stored or otherwise used for all future communication sessions between the same parties or servers.

If the Crawley method were used in connection with the Yang teachings, a new communication path would be calculated for at least each new call initiated between the same parties. As a result, different data communication paths could be used during different calls to transmit data packets between the same two parties, provided that the different communication paths satisfied a minimum QoS. Thus, the Crawley method is distinctly different from that of the above-indicated claims, wherein the communication path between the telephony servers is predetermined, i.e., determined before the initiation of the communication session (the telephone call).

Because none of the cited references teach the use of a predetermined communication path over a packet switched network, Applicant submits that the Examiner's rejection was improper and that Claims 2-4, 7-10, 12, 17, 19, 21-22, and 32-37 are allowable.

D. Issue No. 3

Pending claims 2-4 and 37 recite the concept of a routing and administration server that provides "an identification corresponding to the predetermined communication path to the second telephony server." (emphasis added). Applicant

respectfully submits that none of the cited references disclose a routing and administration server that provides an identification of a predetermined communication path between two telephony servers.

In rejecting claims 2-4, the Examiner stated that Yang teaches a "Directory Server" that sends "a reply containing the identity of the destination INETPHONE server..." *See,* Final Office Action, p.9, line 6. However, the Yang "Directory Server" functions to "map between IP address and area codes of INET Phone servers..." *Yang,* p.4. Importantly, Yang does not contemplate having the "Directory Server" identify any particular *communication path* (either determined or predetermined) between the INETPhone servers. As is known in the art, there may be many different possible communication paths between two nodes on the Internet. In essence, the Yang "Directory Server" may provide the destination address, but it does not provide the path to get there, as recited in claims 2-4 and 37. Presumably, the communication path in Yang would be determined in a conventional manner, i.e., it would be calculated by routers based upon the destination IP address.

In rejecting claim 37, the Examiner stated that "router provide identification of path." *See,* Final Office Action, p.4, line 19. Here, the Examiner seems to be relying on a different disclosure than the Yang "Directory Server" relied upon by the Examiner in connection with claims 2-4. Though the Examiner has not specified the particular "router" to which he refers, Applicant submits that it is generally known in the art that a "router" and a "server" are distinctly different pieces of network equipment. A router may *calculate* a communication path through the Internet, but it does not provide a predetermined communication path.

The fact that the cited references do not disclose a routing and administration server that provides a predetermined communication path is yet another reason why claims 2-4 and 37 are allowable over the cited prior art. Accordingly, the Examiner's rejection should be reversed.

E. Issue No. 4

Claim 5 depends from Claim 1 and includes the following additional step: "accessing said routing and administration database within said first telephony server to obtain the identity of said second telephony server *and the guaranteed level of service corresponding to the calling party.*" (emphasis added). Applicant submits that Claim 5 is allowable over the cited references because none of the references disclose this step.

In rejecting Claim 5, the Examiner indicated that Yang discloses incorporating a local directory on the INETPhone server from which it can obtain the IP address of a remote INETPhone server. *See,* Final Office Action, p. 9, lines 11-13. While this may be true, it falls short of teaching the full recitation of Claim 5. Specifically, the Examiner did not identify where it is disclosed in Yang (or any other of the other cited references) that the database maintained by the local server in Yang incorporates information relating to a "prescribed service level" corresponding to the various calling parties, as recited in Claim 5. Applicant submits that neither Yang nor any of the other cited references disclose this feature. Accordingly, this is another reason why claim 5 is allowable over the cited references.

F. Issue No. 5

Claims 8-10, 15-16, 20-22, and 28-29 each recite steps to the effect that the telephony server associated with the calling party sends digital communication information to the telephony server associated with the called party based upon a sensed condition of the called party. Applicant submits that these recited steps are not taught or suggested in any of the cited references.

The Examiner supported his rejection of claims 9-10 and 15-16 with his statement that "the condition of the called party is monitored by the remote central office and busy status should be relayed to the remote server which in turn sends back condition of called party." *See,* Final Office Action, p.9, lines 14-16. However, the Examiner did not provide a specific citation to any of the cited references in support of his statement. Similarly, the Examiner did not support his rejection of claims 20-22 and 28-29 with any specific citation to the cited references. *See,* Final Office Action, p.10. Applicant is unable to find any location in any of the cited references that teaches the step of sending digital communication information from the telephony server associated with the calling party to the telephony server associated with the called party based upon a sensed condition of the called party. Thus, Applicant submits that the Examiner has failed to demonstrate that Claims 9-10, 15-16, 20-22, and 28-29 are not allowable. Accordingly, the Examiner's rejection should be reversed.

G. Issue No. 6

Claim 12 is a dependent claim that, among other things, includes the following steps:

- sensing at the first central office a condition of the calling party;

- sending to the first telephony server a message indicating the sensed condition of the calling party;

- suspending the transmission of said third data packets by said first telephony server in response to the message; and

- transmitting from the first telephony server to the second telephony server a third signaling data packet including the session identifier and the condition of the calling party.

Applicant respectfully submits that none of these recited steps are taught or suggested in the cited references.

In rejecting claim 12, the Examiner summarily stated that "CO always monitors the condition of calling party for connection. It is also clear that if the call is dropped by the caller, transmission has to be suspended by the central office." *See,* Final Office Action, p.9, lines 17-18. However, the Examiner has not identified anywhere in the cited prior art references where these steps are set forth, and Applicant is unable to find any such teachings. Further, the Examiner simply did not address the element of Claim 12 requiring the transmission of a signaling data packet to the called party concerning the condition of the calling party. Applicant submits that the steps of Claim 12 are not disclosed in the cited prior art references. Thus, Applicant submits that the Examiner has failed to demonstrate that Claim 12 is not allowable, and, therefore, the Examiner's rejection should be reversed.

H. Issue No. 7

Claims 13-16 are dependent claims that, among other things, recite the steps of sending *communication samples* from the called party to the calling party via the network

and "forwarding the received communication samples to the first central office on *an assigned trunk line based on the identifier.*" (emphasis added). The Examiner has not indicated where in any of the cited references these steps are found, nor has applicant been able to find such teachings. Accordingly, Applicant submits that none of the cited references teach or suggest the above-referenced steps recited in claims 13-16, and, therefore, the Examiner's rejection should be reversed for these additional reasons.

I. Issue No. 8

Claims 17 and 22 are dependent claims that, among other things, recite the step of "changing a data rate of the communication link based on traffic on the predetermined communication path." The Examiner rejected Claims 17 and 22 in light of Yang and Crawley, stating that "since the path is on the same link as other communications, the routers can change the rate of any call based on the traffic." *See,* Final Office Action, p.9, lines 19-20. The Examiner does not specify the particular "routers" to which he refers. Nonetheless, Applicant submits that neither Yang nor Crawley teach or suggest changing the data rate of the communication link based on traffic on the predetermined communication path. Accordingly, Applicant submits that this is yet another reason why Claims 17 and 22 are allowable over the cited prior art.

J. Issue No. 9

Pending claims 30-34 all recite the step of "generating a session identifier" and including the session identifier in data packets along with audio information. Conceding that the primary reference Yang does not disclose a "session identifier" or its incorporation into data packets having audio information, the Examiner relies upon

Picard for its alleged teaching of a "session identifier." *See,* Final Office Action, p.5. Applicant submits that Picard does not disclose the use of a "session identifier" as set forth in claims 30-34.

Picard briefly refers to a "unique identifier from the session information 175." *Picard,* 18:23-25. But Picard does not elaborate on what specifically the "unique identifier" is or how and for what the "unique identifier" is used. What is clear, however, is that the "unique identifier" in Picard does *not* identify "a call attempt between the calling party and called party", as recited in claim 30, since Picard is not directed to a system having either a "calling party" or a "called party." Further, it is clear that the Picard "unique identifier" is *not* incorporated along with a "called number" to form a signaling message, which is sent from a first telephony server to a second telephony server, as is further recited in claim 30. Finally, there is no suggestion in either Yang or Picard that "at least some of the packets containing audio information also contain the session identifier", as recited in claim 30. In short, neither Yang nor Picard contemplate or disclose using a session identifier in connection with a long distance telephone system over a packet switched network, nor does either reference contemplate or disclose the manner in which such a "session identifier" would be used and transmitted between nodes on such a network.

For these reasons, Applicant respectfully submits that pending claims 30-34 are allowable over the cited prior art and that the Examiner's rejection should be reversed.

IX. CONCLUSION

In view of the foregoing arguments, Applicant respectfully submits that the pending claims are novel over the cited references. The Examiner's rejection of Claims 1-10, 12-22 and 28-37 is improper because Modica does not teach or suggest each and every element of the claimed invention. In view of the above considerations, a reversal of the rejections of record is respectfully requested.

The fee of $320.00, as applicable under the provisions of 37 C.F.R. §1.17(c), should be charged to Deposit Account No. 18-0013 in the name of Rader, Fishman & Grauer PLLC. Please charge any additional fees or credits to this Deposit Account as authorized by the original transmittal letter in this application. A duplicate of this notice is enclosed for this purpose.

Respectfully submitted,

Date: January 23, 2003

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Enclosure – Appendix

X. APPENDIX – CLAIMS ON APPEAL

1. A method of telecommunication over a wide area packet switched network, the method comprising:

sending from a calling party a called number, corresponding to a called party and including an area code, to a first central office connected to a first telephone system;

forwarding the called number from the first central office to a first telephony server, connected to the first telephone system and in communication with the wide area packet switched network, via a signaling channel of the first telephone system;

identifying a second telephony serve, in communication with the wide area packet switched network and serving said called party in a second telephone system, from a routing and administration database by using at least said area code;

sending the called number from the first telephony server to the second telephony server via said wide area packet switched network;

allocating a resource on the wide area packet switched network sufficient to provide a guaranteed level of service through the wide area packet switched network; and

selectively establishing a communication link, via the resource at at least the guaranteed level of service, between the first telephony server and the second telephony server through the wide area packet switched network, to establish communication between the calling and called parties.

2. The method of claim 1, wherein the identifying step comprises:

sending a routing request via the wide area packet switched network from the first

telephony server to a routing and administration server having said routing and administration database, the routing request including said area code; and

receiving from the routing and administration server via the wide area packet switched network a routing response including the identity of said second telephony server and a predetermined communication path corresponding to the second telephony server.

3. The method of claim 2, wherein the identifying step further comprises using a second predetermined communication path within said wide area packet switched network to send and receive the routing request and routing response, respectively.

4. The method of claim 2, wherein the routing request includes a calling number of the calling party, the identifying step further comprising obtaining the guaranteed level of service corresponding to the calling number from the routing response.

5. The method of claim 1, wherein the identifying step comprises accessing said routing and administration database within said first telephony server to obtain the identity of said second telephony server and the guaranteed level of service corresponding to the calling party.

6. The method of claim 1, wherein the identifying step comprises receiving a network address of the second telephony server on the wide area packet switched

network.

7. The method of claim 6, wherein the step of sending the called number from the first telephony server to the second telephony server comprises sending a first signaling data packet carrying the called number as payload data and the second telephony server network address as a destination address to a router selectively routing data packets within the wide area packet switched network, the router sending the first data packet via a predetermined communication path based on the destination address.

8. The method of claim 7, wherein the step of sending the called number from the first telephony server to the second telephony server further comprises:

generating a session identifier identifying a call attempt between the calling party and the called party; and

including the session identifier in said first signaling data packet.

9. The method of claim 8, wherein said selectively establishing step comprises:

receiving a second signaling data packet from the second telephony server including the session identifier and a condition of the called party; and

sending from the first telephony server first traffic data packets having said destination address and carrying digital communication information and said session identifier based on the condition of the called party.

10. The method of claim 9, wherein the first traffic data packets sending step comprises outputting the first traffic data packets at least at a minimum data rate according to the guaranteed level of service.

12. The method of claim 9, further comprising:

sensing at the first central office a condition of the calling party;

sending to the first telephony server a message indicating the sensed condition of the calling party;

suspending the transmission of said third data packets by said first telephony server in response to the message; and

transmitting from the first telephony server to the second telephony server a third signaling data packet including the session identifier and the condition of the calling party.

13. The method of claim 1, further comprising:

receiving at the first telephony server first data packets carrying an identifier for the established communication link and communication samples from the called party via the wide area packet switched network;

forwarding the received communication samples to the first central office on an assigned trunk line based on the identifier; and

supplying the communication samples received on the assigned trunk line from the first central office to the calling party.

14. The method of claim 13, wherein the communication samples include at least one of voice samples and data words.

15. The method of claim 13, further comprising:

receiving at the first telephony server a second data packet carrying an identifier for the established communication link and signaling information indicating a condition of the called party;

generating a signaling message to the first central office from the first telephony server based on the signaling information; and

in the first central office, initiating a response for the calling party based on the signaling message.

16. The method of claim 15, wherein the response initiating step comprises disconnecting the calling party from the communication link.

17. The method of claim 1, wherein the selectively establishing step comprises:

setting the communication link along a predetermined communication path within said wide area packet switched network; and

changing a data rate of the communication link based on traffic on the predetermined communication path.

18. The method of claim 1, wherein the wide area packet switched network is Internet, the identifying step comprising translating an Internet Protocol (IP) address of the second telephony server from the area code.

19. The method of claim 18, wherein the sending step comprises outputting from the first telephony server first packets having the IP address of the second telephony server to a router, the router forwarding the first packets along a predetermined communication path based on the IP address of the second telephony server.

20. A method of telecommunication over a wide area packet switched network, the method comprising:

in a first telephony server connected to a first telephone system, receiving via a wide area packet switched network a first data packet transmitted by a second telephony server of a second telephone system, the first data packet having (1) a destination address corresponding to the first telephony server, (2) a session identifier, and (3) a destination number having an area code served by the first telephony server;

initiating a query by the first telephony server for determining via a signaling communication network of the first telephone system a condition of the destination number from a first central office serving the destination number;

sending a second data packet carrying said session identifier and said condition from the first telephony server to the second telephony server;

allocating at least one network resource to support a guaranteed level of service through the wide area packet switched network; and

selectively establishing a communication link via the resource to provide the guaranteed level of service between the first telephony server and the second telephony server through the wide area packet switched network, to enable communication between the destination number and a station served by the second telephony server.

21. The method of claim 20, wherein the selectively establishing step comprises establishing the link on a predetermined communication path in the wide area packet switch network.

22. The method of claim 21, wherein the selectively establishing step comprises changing a data rate of the communication link based on traffic on the predetermined communication path.

28. The method of claim 20 further comprising initiating a line-sided connection between the first telephony server and the destination number in response to the first central office specifying said condition as an available condition.

29. The method of claim 20, wherein the signaling communication network is a common channel interoffice signaling network.

30. A method of telecommunication over a wide area packet switched network, the method comprising:

sending from a calling party a called number, corresponding to a called party, to a

first central office connection to a first telephone system;

forwarding the called number from the first central office to a first telephony server, connected to the first telephone system and in communication with the wide area packet switched network, via a signaling channel of the first telephone system;

identifying a second telephony server, in communication with the wide area packet switched network and serving said called party in a second telephone system, from a routing and administration database by using at least a part of the called number;

generating a session identifier identifying a call attempt between the calling party and the called party;

sending a signaling message from the first telephony server to the second telephony server via said wide area packet switched network, the signaling message comprising the called number and the session identifier; and

communicating a plurality of packets containing audio information between the first and second telephony servers through the wide area packet switched network, to establish telephone communication between the calling and called parties, wherein at least some of the packets containing audio information also contain the session identifier.

31. The method as in claim 30, wherein the step of communicating comprises:

allocating a resource on the wide area packet switched network to communications between the calling party and the called party; and

communicating the packets containing audio information through the wide area packet switched network using the allocated resource.

32. The method as in claim 30, wherein the identifying step comprises:

sending a routing request message via the wide area packet switched network from the first telephony server to a routing and administration server having said routing and administration database, the routing request message including said at least part of the called number; and

receiving from the routing and administration server via the wide area packet switched network a routing response including the identity of said second telephony server and the identity of a predetermined communication path through the wide area packet switched network to the second telephony server capable of providing a guaranteed level of service.

33. The method as in claim 32, wherein:

the routing request message further includes an identification corresponding to the calling party, and

the identifying step further comprises determining the guaranteed level of service based on the identification corresponding to the calling party.

34. The method as in claim 32, wherein the signaling channel of the first telephone system comprises a link from an interoffice signaling network of the first telephone system to the first telephony server.

35. A method of telecommunication over a wide area packet switched network, the method comprising:

sending from a calling party a called number, corresponding to a called party, to a first central office connected to a first telephone system;

forwarding the called number from the first central office to a first telephony server, connected to the first telephone system and in communication with the wide area packet switched network;

identifying a second telephony server, in communication with the wide area packet switched network and serving said called party in a second telephone system, from a routing and administration database by using at least part of the called number;

sending the called number from the first telephony server to the second telephony server via said wide area packet switched network;

establishing a communication link between the first telephony server and the second telephony server, wherein the establishing step comprises setting the communication link along a predetermined communication path within said wide area packet switched network; and

communicating telephone information between the calling and called parties via the servers and the predetermined communication path.

36. The method as in claim 35, wherein the setting of the communication link along the predetermined communication path comprises allocating a resource along the path for the communication link, such that the communication link will provide at least a guaranteed minimum level of service throughout the communication of the telephone information.

37. The method as in claim 35, wherein the identifying step comprises:

sending a routing request via the wide area packet switched network from the first telephony server to a routing and administration server having said routing and administration database; and

receiving from the routing and administration server via the wide area packet switched network a routing response including the identity of said second telephony server and an identification corresponding to the predetermined communication path to the second telephony server.